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CITY OF ABERDEEN.

Report

BY THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1906.





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POPULATION.

(Table I.)

As estimated by the Registrar-General from the census of 1901 and the previous census of 1891, the population of the city, at the middle of 1906, was 171,022, whereof 68,457 persons were in the St. Nicholas division, including Torry; and the remainder—102,565—were in the St. Machar division, including Old Aberdeen and Woodside. The population in the preceding year was similarly estimated at 167,537. The increase, according to these estimates, amounts to 3,485. There can, however, be little doubt that, since the last census in 1901, the population has not been growing at the rate estimated by the Registrar-General. Estimating the population from the increase in the Voters' Roll, I believe that it did not exceed 166,000 at the middle of 1906. The city still continues to suffer from depression in many of its industries, and it is doubtful if at any time during the past ten or twenty years there has been so general complaint of bad trade as within the past year. The addition to the valuation of the city amounted last year to only £6,379, as against an average of £23,887 for the preceding ten years.

In order to avoid discrepancy with the rates as published by the Registrar-General, the rates for births, marriages, and deaths in the tables accompanying this report are calculated on the population as estimated by him. This means that the rates given are probably lower than the actual rates by about 2·9 per cent. Thus, the total death-rate for the year, instead of being 14·6, was probably nearer 15·0, and the birth-rate, instead of being 27·6, was probably about 28·4.

BIRTH-RATE.

(Table II.)

The total number of births during the year was 4,712, or at the rate of 27·6 per 1,000 of the population. In the preceding year the births amounted to 4,892, equivalent to a rate of 29·2. The birth-rate has been steadily falling during the past four years, and, even when allowance is made for its being estimated upon too high a population, the rate for the last year is distinctly the lowest on record since civil registration came into full operation. The fall in the birth-rate is, however, being compensated for by a corresponding fall in the death-rate. The difference between the death-rate and the birth-rate last year was 13·0. Thirty years ago, when both rates stood very much higher, the difference averaged 13·2 over the decade 1866-75. The fall in the birth-rate since the preceding year has been felt in both divisions of the city, but more especially in the St. Nicholas division, which is the division more largely inhabited by the working classes. In preceding years, the decline has been distinctly more marked in the St. Machar than in the St. Nicholas division. The drop in the St. Nicholas division last year is quite unprecedented for that division, and amounted to 3·2 per 1,000 of the population.

TABLE I.—POPULATION OF ABERDEEN IN 1906.

	Estimated Population. — 1906.	PERCENTAGE OF POPULATION AT EACH AGE-PERIOD, Calculated from Census 1891.					
		Under 1 year.	0—5 years.	5—15 years.	15—25 years.	25—60 years.	Above 60 years.
ST. NICHOLAS AND TORRY .	68,457	2·95	13·37	23·54	20·10	35·76	7·23
ST. MACHAR . (Incl. Woodside and Old Aberdeen).	102,565	2·46	11·46	22·23	21·65	35·86	8·80
Whole City . . .	171,022	2·67	12·26	22·79	21·00	35·81	8·14

TABLE II.—BIRTH, DEATH, AND MARRIAGE RATES IN ABERDEEN,
Per 1,000 of Population.

Year.	Births.			Deaths.			Marriages.		
	St. Nicholas.	St. Machar.	City.	St. Nicholas.	St. Machar.	City.	St. Nicholas.	St. Machar.	City.
1906 . . .	31·8	24·7	27·6	16·7	13·2	14·6	12·3	5·0	7·9
1905 . . .	35·0	25·4	29·2	19·0	13·4	15·6	12·6	5·3	8·2
1904 . . .	34·2	26·8	29·8	20·6	15·0	17·2	14·0	5·9	9·2
1903 . . .	35·9	27·7	31·0	21·1	14·4	17·0	14·2	5·6	9·1
1902 . . .	35·4	27·2	30·5	22·1	15·1	17·9	14·1	5·7	9·1
1901 . . .	37·0	27·0	31·0	21·6	16·0	18·2	13·3	5·9	8·9
Mean of } 1901-1905 }	35·5	26·8	30·3	20·9	14·8	17·2	13·6	5·7	8·9
1900 . . .	37·8	27·9	31·8	23·7	15·9	19·0	14·0	5·6	9·0
1899 . . .	38·0	27·7	31·9	22·6	15·5	18·4	13·9	6·7	9·6
1898 . . .	39·7	28·8	33·3	24·3	15·5	19·1	15·0	6·1	9·7
1897 . . .	38·7	28·8	32·8	22·5	14·7	17·9	14·3	6·2	9·5
1896 . . .	37·6	29·3	32·7	22·7	15·1	18·2	14·3	6·4	9·7
Mean of } 1896-1900 }	38·4	28·5	32·5	23·2	15·3	18·5	14·3	6·2	9·5
Mean of } 1886-1895 }	35·4	29·5	32·2	22·7	17·4	20·0	11·1	5·7	8·1
1876-1885 .	...	...	34·4	...	...	20·4	...	...	7·8
1866-1875 .	...	...	36·2	...	...	23·0	...	...	8·2



MARRIAGE-RATE.

(Table II.)

During the year there were 1,358 marriages within the city, equivalent to a rate of 7·9 per 1,000 of population. In the preceding year, there were 1,374 marriages, with a rate of 8·2. The rate last year is the lowest for many years, and is, no doubt, due to the continued industrial depression. The marriage-rate in the St. Nicholas division of the city was more than twice as high as the marriage-rate in the St. Machar division, but this is largely due to the principal halls, in which many of the marriages are celebrated, being situated within the former division. It is also considerably affected by the presence in this division of several of the leading churches.

DEATH-RATE.

(Table II.)

The total number of deaths during the year was 2,491, equal to a death-rate of 14·57 per 1,000 of the population. In the preceding year, the deaths amounted to 2,618, giving a death-rate of 15·63. These death-rates have been arrived at after adjusting the list of deaths by the interchange between this and other districts of deaths of persons occurring in districts outside their usual place of residence.

Allowing for the death-rate for the past year being unduly lowered—say, to the extent of 0·4, by a probable over-estimation of the population on which the rate is calculated—the rate is decidedly the lowest on record. During the last four years ending 1906, the rates have been, respectively, 17·0, 17·2, 15·6, and 14·6. These figures show how rapidly the rate has fallen recently, the more when it is borne in mind that the lowest recorded rate up to the commencement of these four years was 17·9 in 1897 and 1902. Compared with the average rate thirty to forty years ago, the rate for last year was only slightly above two-thirds of that rate. If the rate last year had remained as high as in those earlier years, there would have been 3,933 deaths in place of 2,491—or an increase of 1,442.

ANALYSIS OF THE DEATH-RATE.

(a) *Mortality in Relation to Age (Tables III., IV., and V.).—Infantile Mortality.*—It is very gratifying to find that, whatever be the cause, a distinct impression is beginning to be made on the death-rate among infants under one year of age. During the past year, this rate amounted to only 131·2 per 1,000 of population, as against 151·6 in the preceding year—the rate for the preceding year being the lowest recorded for at least twenty years. I discussed somewhat fully in the preceding annual report the main influences I considered to be at work in maintaining the high infantile mortality, and indicated various means by which I thought the mortality might be reduced. Among others, I laid stress upon the employment of Female Health Visitors, who would make it their duty to get into touch with the mothers of new-born infants, especially among the poorer classes, where ignorance as to the proper feeding of infants is more common, in order to instruct them as to the proper methods to be followed in rearing their infants. The Town Council of Aberdeen has had one such Visitor employed in this work since the spring of 1903. Her duties were for a time not wholly confined to such work, and embraced also the visitation of houses in respect of uncleanness. This double duty probably interfered for a time with the progress of her work in relation to infant feeding. More recently, she has been devoting the whole of her time to the care of infants; and the Town Council have so appreciated the value of such services that they resolved to appoint a second Health Visitor about the middle of last year. One of these Visitors gives part of her time to the inspection of unclean houses, while the rest of her time is devoted to

TABLE III.—DEATHS AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES.
Year 1906.

AGE.	ALL CAUSES.	Zymotic Diseases.				Tuberculous Diseases.		Respiratory Diseases.		Dis. of Circulatory System.	Dis. of Urinary System.	Nervous Diseases.		Dis. of Digestive System.	Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Miasmatic.	Diarrhoeal.	Venereal.	Septic.	Phthisis.	Other Tubercular.	Pneumonia.	Other Respiratory.			Apoplexy & Hemiplegia.	Other Nervous.					Under age of 1 year.	Above age of 60 years.	
WHOLE CITY.																				
Under 1 year,	599	66	60	11	5	1	19	41	44	14	1	2	68	26	0	157	9	57	...	18
Under 5 years,	867	156	73	12	5	4	69	76	67	16	2	3	88	35	0	158	20	57	...	26
5—15 „	94	10	1	0	1	14	24	6	1	4	1	2	8	5	0	0	7	...	...	10
15—25 „	122	1	0	0	1	63	6	9	1	10	2	1	6	3	1	0	3	...	...	15
25—60 „	603	12	3	4	10	126	16	52	35	79	22	28	27	42	68	0	38	...	...	41
60+ „	805	18	9	0	3	5	1	36	104	200	48	112	31	36	72	0	17	...	84	29
ALL AGES, .	2491	197	86	16	20	212	116	179	208	309	75	146	160	121	141	158	85	57	84	121
ST. NICHOLAS (including Torry).																				
Under 1 year,	324	40	31	7	3	1	7	26	27	4	1	0	37	10	0	74	5	37	...	14
Under 5 years,	494	97	38	8	3	4	35	48	41	5	1	0	51	16	0	75	14	37	...	21
5—15 „	58	6	1	0	0	11	16	3	0	2	1	1	4	2	0	...	5	...	...	6
15—25 „	54	1	0	0	1	23	1	6	0	4	0	0	5	3	0	...	2	...	...	8
25—60 „	266	5	1	2	8	42	7	23	17	33	13	11	10	20	34	...	25	...	...	15
60+ „	268	5	7	0	0	3	1	14	39	64	13	30	6	11	23	...	8	...	31	13
ALL AGES, .	1140	114	47	10	12	83	60	94	97	108	28	42	76	52	57	75	54	37	31	63
ST. MACHAR (including Old Aberdeen and Woodside).																				
Under 1 year,	275	26	29	4	2	0	12	15	17	10	0	2	31	16	0	83	4	20	...	4
Under 5 years,	373	59	35	4	2	0	34	28	26	11	1	3	37	19	0	83	6	20	...	5
5—15 „	36	4	0	0	1	3	8	3	1	2	0	1	4	3	0	...	2	...	...	4
15—25 „	68	0	0	0	0	40	5	3	1	6	2	1	1	0	1	...	1	...	...	7
25—60 „	337	7	2	2	2	84	9	29	18	46	9	17	17	22	34	...	13	...	...	26
60+ „	537	13	2	0	3	2	0	22	65	136	35	82	25	25	49	...	9	...	53	16
ALL AGES, .	1351	83	39	6	8	129	56	85	111	201	47	104	84	69	84	83	31	20	53	58

TABLE IV.—DEATH RATES AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES
(Per 100,000 of population at each age). Year 1906.

AGE.	ALL CAUSES.	Zymotic Diseases.				Tuberculous Diseases.		Respiratory Diseases.		Dis. of Circulatory System.	Dis. of Urinary System.	Nervous Diseases.		Dis. of Digestive System.	Malignant Diseases.	Developmental Diseases (ex. old age).	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Miasmatic.	Diarrhoeal.	Venercal.	Septic.	Phthisis.	Other Tubercular.	Pneumonia.	Other Respiratory.			Apoplexy & Hemiplegia.	Other Nervous.					Under age of 1 year.	Above age of 60 years.	
WHOLE CITY.																				
Under 1 year,	13119	1445	1314	241	110	22	416	898	964	307	22	44	1489	569.	0	3438	197	1248	...	394
Under 5 years,	4135	744	348	57	24	19	329	362	320	76	10	14	420	167	0	754	95	272	...	124
5—15 „	241	26	3	0	3	36	62	15	3	10	3	5	21	13	0	0	18	...	...	26
15—25 „	340	3	0	0	3	175	17	25	3	28	6	3	17	8	3	0	8	...	...	42
25—60 „	985	20	5	7	16	206	26	85	57	129	36	46	44	69	111	0	62	...	...	67
60+ „	5783	129	65	0	22	36	7	259	747	1437	345	805	223	259	517	0	122	...	603	208
ALL AGES, .	1457	115	50	9	12	124	68	105	122	181	44	85	94	71	82	92	50	...	...	71
ST. NICHOLAS (including Torry).																				
Under 1 year,	15953	1969	1526	345	148	49	345	1280	1329	197	49	0	1822	492	0	3644	246	1822	...	689
Under 5 years,	5382	1057	414	87	33	44	381	523	446	54	11	0	556	174	0	817	153	402	...	229
5—15 „	359	57	6	0	0	68	99	19	0	12	6	6	25	12	0	0	31	...	...	37
15—25 „	393	7	0	0	7	167	7	44	0	29	0	0	36	22	0	0	15	...	...	58
25—60 „	1087	20	4	8	33	172	29	94	69	135	53	45	41	82	139	0	102	...	...	61
60+ „	5437	101	142	0	0	61	20	284	791	1298	264	609	122	223	467	0	162	...	629	264
ALL AGES, .	1665	167	69	15	18	121	88	137	142	158	41	61	111	76	83	110	79	...	...	92
ST. MACHAR (including Old Aberdeen and Woodside).																				
Under 1 year,	10848	1026	1144	158	79	0	473	592	671	394	0	79	1223	631	0	3274	158	789	..	158
Under 5 years,	3164	500	296	34	17	0	288	238	220	93	8	25	314	161	0	703	51	169	...	42
5—15 „	158	18	0	0	4	13	35	13	4	9	0	4	18	13	0	0	9	...	...	18
15—25 „	307	0	0	0	0	180	23	14	5	27	9	5	5	0	5	0	5	...	...	32
25—60 „	917	19	5	5	5	228	24	79	49	125	24	46	46	60	92	0	35	...	...	71
60+ „	5972	145	22	0	33	23	0	245	723	1512	389	912	278	278	545	0	100	...	589	178
ALL AGES, .	1317	81	38	6	8	126	55	83	108	196	46	101	82	67	82	81	30	...	...	57

TABLE V.—MORTALITY FROM ALL CAUSES AT VARIOUS AGE-PERIODS
(per 1,000 of population at each age).

Year.	AGE PERIOD.						All Ages.
	Under 1 year.	0—5 Years. (Infant Period.)	5—15 years. (School Period.)	15—25 years. (Adolescent Period.)	25—60 years. (Mature Period.)	60 years and upwards. (Post-mature Period.)	
1906 . .	131·2	41·4	2·4	3·4	9·9	57·8	14·6
1905 . .	151·6	44·0	2·8	3·7	10·6	61·6	15·6
1904 . .	167·2	54·7	3·0	3·5	11·1	62·9	17·2
1903 . .	157·2	49·7	2·8	4·6	11·8	62·7	17·0
1902 . .	156·5	48·4	2·8	5·2	12·8	69·4	17·9
1901 . .	176·5	52·2	3·4	5·1	12·4	68·3	18·2
Mean of 1901-1905	161·8	49·8	3·0	4·4	11·7	65·0	17·2
1900 . .	177·8	54·4	3·0	4·9	14·0	68·9	19·0
1899 . .	171·3	55·0	2·9	5·6	12·6	64·7	18·4
1898 . .	196·4	62·8	3·8	4·8	12·1	64·1	19·1
1897 . .	173·8	52·5	3·3	5·5	12·0	64·6	17·9
1896 . .	157·3	52·2	4·6	5·1	12·9	62·3	18·2
Mean of 1896-1900	175·3	55·4	3·5	5·2	12·7	64·9	18·5
Mean of 1886-95	168·5	53·8	4·6	6·3	12·8	68·1	20·0
1876-85 . .	144·9	52·0	5·7	6·9	13·5	69·9	20·4
1866-75 . .	146·2	59·4	7·4	6·0	18·7	72·3	23·0

the care of infants. It has been thought advisable that these two different kinds of duties—the one of a police and the other of an advisory character—should be exercised in separate districts of the city, so that the households visited by her for the purpose of giving instruction in infant management should not have to associate her calls too definitely with remarks upon uncleanness, that might, in the event of their not being attended to, have to be followed up by action under the Public Health Act. The other Visitor is devoting the whole of her time to the care of infants.

If the very considerable reduction in the death-rate among infants can, in some measure, be claimed as resulting from the work of the Health Visitors, it is plain that few steps have recently been taken by the Town Council of Aberdeen in the interests of public health that have had larger results. I am glad to be able to add that the infant mortality during the current year shows a tendency to become still lower. I am aware that in some quarters doubt has been expressed as to the utility of Health Visitors in relation to the care of infants, but our experience in Aberdeen seems to show that their services are of great value.

It may be of interest to state that the two Health Visitors, although one, as already explained, is not devoting the whole of her time to the care of infants, find themselves able to visit nearly two-thirds of all the homes in which children have recently been born. Owing to the usual delay in registering births, the Visitors have, unfortunately, not been able, as a rule, to get into touch with the infant until nearly three weeks after its birth, and thus have missed being of service at a critical stage in its life, when bad habits of feeding are asserting themselves. They have found, however, that the mothers, when properly approached, are, in almost every instance, willing to listen to the instructions, and they find, on further visitation, that a considerable proportion of the mothers have carried out the advice given. Bottle-feeding is found by the Visitors to be in use for about one in every seven babies. The proportion is, therefore, not so high as in some other towns. Where the infant is bottle-fed, much attention has been given by the Visitors to securing thorough cleanliness of the bottle, and to the substitution of the tubeless bottle for the common long-tube bottle. In order to encourage the use of the tubeless bottle, the Health Visitors are now empowered to supply such bottles, with teats, at cost price, a quantity of these having been obtained by the Public Health Department from the makers. The Department finds that it can supply a bottle, with a good rubber teat—preferably, a large teat, so that it can be easily turned inside out and cleaned—for threepence, and, probably, it could be supplied at even less if the Department were to buy the bottles and teats in still larger quantity. As it is, the price is considerably under that usually charged in shops, and there is, therefore, a greater inducement to mothers to replace the long-tube bottle by the tubeless bottle. Where the persons are very poor, the bottle is supplied gratuitously, but there are few cases where this is necessary. Two bottles are always supplied to each mother, so that one can be steeped and washed while the other is being used.

We anticipate, from the adoption of the Notification of Births Act, which will enable us to deal with infants right from their birth, a considerable increase in the usefulness of the work of the Health Visitors, and, accordingly, a still further reduction of the infantile mortality.

It is of interest to note that the recent reduction in infantile mortality has been mainly in deaths from digestive and diarrhoeal diseases—in other words, the diseases most likely to be associated with errors in feeding. There has also been a very considerable fall in deaths from diseases of the respiratory system. As instruction is given by the Visitors in the proper clothing, as well as in the feeding, of infants, this decline may also be, in part, due to the Visitors.

In view of the possible extension of the Midwives' Registration Act to Scotland, it may

be of value to state that the information obtained by the Health Visitors shows that about a half of the mothers called upon by them are attended at childbirth by a midwife or neighbour only, and not by a doctor. It thus appears that more than one-third of the total confinements in Aberdeen are unattended by a medical man. If this is to continue, it strongly suggests the need for the proper instruction and certification of midwives. Some of the midwives are still of the old-fashioned type, with notions as to the treatment of babies scarcely better than those of ignorant mothers. It is, for example, not uncommon to find them recommending the frequent administration of castor oil to a baby for some weeks after birth. Some are also neglectful of the state of the general health of the mother, so that the Visitors not infrequently find that, while the baby is being unduly purged with laxatives, the mother is suffering from the opposite condition, in an aggravated form. It is an important part of the duty of the Visitors to impress upon mothers who are nursing their babies themselves that the health of the infant is greatly dependent upon the health of the mother. Some curious forms of ignorance are found among mothers. The Visitors, for example, are frequently told that vomiting is the sign of a growing child, and they have found some mothers quite anxious because vomiting had not taken place.

During the current year, in supplement of similar information obtained a few years ago, a systematic visitation has been made of every family in which a child under two years of age has died, with a view to obtaining full information as to the circumstances and cause of the death. I hope to be able to present an analysis of this information in my next annual report.

The question of the purity of the milk is receiving considerable attention, and there is reason to believe that, in so far as the dairies within the town are concerned, on account of strict supervision by the Sanitary Inspector, as also by the Veterinary Inspector, increasing care is being given to the practice of thorough cleanliness in all the processes connected with the collection and conveyance of the milk. We have still difficulty in having the same assurance in regard to the large proportion of milk obtained from dairies outside the city, but we are hopeful that an arrangement may be arrived at whereby these dairies will submit to voluntary inspection by the Veterinary Inspector of the city. This is now being done in some American cities, where power is given to prevent the sale of milk from a dairy outside the city, unless the owner of the dairy is willing to have his dairy examined by the inspectors of the town.

In view of the most recent observations on the effects of sterilisation on the quality of the milk, there is less inducement than formerly to establish dépôts for the preparation and sale of sterilised or Pasteurised milk. The latest of these experiments show that fresh, unsterilised milk possesses a certain inhibitory power against the too rapid multiplication of germs, and that this power is less when the milk is sterilised. St. John and Pennington, working in the Philadelphia Clinical Laboratory, found that germs multiplied, within twenty-four hours, seven times as fast in Pasteurised milk as in raw milk; and the difference rapidly increased the longer the milk was kept. Such results do not, of course, militate against the use of freshly sterilised milk, but it is difficult to ensure that, where sterilised milk is purchased by mothers for the use of babies, it will be used within a few hours and no part of it kept, after exposure to the air, for such a time as may allow large multiplication of micro-organisms. These and similar observations point very strongly to the need for very full powers being granted to Local Authorities for securing the greatest possible purity of milk in its natural condition, so that there need be no recourse to sterilisation.

*Mortality at "School" Age-Period (5-15 years).—*The mortality at this period still continues its remarkable decline. It was only 2·4 per 1,000 of the population at this age during the past year, as against 2·8 in the preceding year, and 3·0 in 1904. The rate is now less than one-third of the average rate thirty years ago.

I regret to report that no steps have as yet been taken by the School Board towards securing systematic medical inspection of the children, but it is hoped that the teaching

arrangements of the new Provincial Committee for the Training of Teachers, under which a Lecturer in School Hygiene has been appointed, may pave the way for a comparatively inexpensive system. It is part of the duty of this Lecturer to train his pupils in the recognition of the more obvious ailments of children, especially those that interfere with their proper education and regular attendance; and it would only be natural to combine these duties with a systematic inspection of all the school children, provided that sufficient assistance were supplied. There should also be no difficulty in co-ordinating his work with that of the Public Health Department of the city, so that there would be complete and effective co-operation without overlapping or friction. The movement for medical inspection is rapidly increasing in strength throughout the country generally, and it will be impossible for any town of the importance of Aberdeen to remain unaffected by it. As I have remarked in previous reports, the gain to the health of the children, and to efficiency in teaching, would far more than counterbalance any possible cost.

I have frequently referred in these reports to the need for a larger provision of play and recreation grounds for children. The demolition of a large area of slum property in the Gallowgate has recently enabled the Town Council to provide some additional space for this purpose, which will be of great value to the children in that somewhat crowded locality. But there is still great need in many other parts of the town for additional playgrounds, even although of limited extent. It would mark a great advance in the planning of the city if it were possible to obtain parliamentary powers to carry out the suggestion made in last year's report, whereby proprietors of feuing ground should be obliged to make provision for such recreation spaces. In some towns abroad, this is now being done.

Mortality at "Adolescent" Period (15-25 years).—The death-rate at this period during the past year was 3·4 per 1,000 of the population at that age, and is the lowest recorded. The next lowest was in 1904, when the rate was 3·5. If allowance be made for the error, already referred to, in the over-estimation of the population of the city, it is probable that the death-rate at the "adolescent" period last year was practically the same as in 1904. This rate, like that at the "school" age-period, has also fallen greatly during the past thirty years, and is now not much more than half the average for the decade 1866-75.

Mortality at "Mature" Age-Period (25-60 years).—The death-rate (9·9 per 1,000) at this age-period last year was also only about half of the average for 1866-75, and is distinctly the lowest on record, even when allowance is made for over-estimation of the population. There has been a remarkable decline in this rate during the past five years. In 1902 it was 12·8, and it has shown a steady fall in every subsequent year. For nearly twenty years previous to 1902 the rate remained practically unchanged. It is difficult to form any definite opinion of the cause of this decline in recent years, but, as I have observed in previous reports, it may, in some measure, be due to the more stringent application in recent years by the Sanitary Department and the Factory Inspector of the laws applicable to the sanitary condition of workshops and factories, as also to the considerable clearances of slum property in the more congested parts of the city.

Mortality at "Post-Mature" Age-Period (60 years and upwards).—The death-rate (57·8 per 1,000) at this, the latest of the age-periods, is also the lowest on record. Here also the fall has been especially marked within the last few years, and may be due to the same causes as have been operative at the preceding age-period. This rate has fallen by about 20 per cent. as compared with the average of the decade 1866-75.

(b) *Mortality in Relation to Cause.*—Tables III. and IV. give details of this for the past year, and Table VI. affords material for a comparison with previous years. The chief causes were, in the order of their numerical importance, diseases of the respiratory system, with 387 deaths, or 16 per cent. of the total deaths from all causes; tubercular diseases, with 323 deaths, or 13 per cent. of the total deaths; diseases of the circulatory system, with 309 deaths, or 12 per cent. of the total deaths; diseases of the brain and nervous system, with

306 deaths, or 12 per cent. of the total deaths; diseases of the digestive system, including diarrhoeal diseases, with 207 deaths, or 8 per cent. of the total deaths; miasmatic diseases, with 197 deaths, or 8 per cent. of the total deaths; developmental diseases (excluding old age), with 158 deaths, or 6 per cent. of the total deaths; and malignant diseases, with 141 deaths, or 6 per cent. of the total deaths. Then follow diseases of the urinary system, with 75 deaths; septic diseases, with 20 deaths; and venereal diseases, with 16 deaths. In 85 cases, death was assigned to accident or violence; and, in 141 cases, to debility or atrophy, of which 57 were among children under one year of age, and 84 among persons of 60 years of age and upwards. The causes of death were unequally distributed over the various age-periods.

Among infants under one year, the most frequent causes of death were developmental diseases (including prematurity), which, as in the preceding year, accounted for about one-fourth of the deaths, diseases of the digestive system (including diarrhoea) accounting for one-seventh of the deaths, diseases of the nervous system (including convulsions) accounting for one-ninth, and miasmatic diseases accounting for also about one-ninth.

At the "school" age-period the most frequent cause of death during the past year was tuberculous diseases, with almost exactly two-fifths of the deaths, or the same proportion as in the preceding year; diseases of the nervous system and miasmatic diseases, each with one-ninth; diseases of the respiratory system, with one-thirteenth; and diseases of the digestive system, including diarrhoeal diseases, with one-sixteenth. At this age-period, accident and violence accounted for 1 in every 13 deaths.

At the "adolescent" age-period, tuberculous diseases again came to the front, with fully one-half of the deaths, followed at a long interval by diseases of the circulatory system and of the respiratory system, each with one-twelfth, and by nervous diseases, with one-seventeenth.

At the "mature" age-period, tuberculous diseases were also the leading cause of mortality, with about one-fourth of the deaths, being a higher proportion than in the preceding year. These were followed by diseases of the respiratory system, with one-seventh of the deaths; circulatory diseases, with rather less than one-seventh; malignant diseases, with one-ninth; nervous diseases, with one-twelfth; and digestive diseases, with one-fifteenth. Accident and violence accounted for 1 death in every 16.

At the "post-mature" age-period, diseases of the circulatory system stood, as usual, first, with about one-fourth of the deaths, followed by diseases of the nervous system and diseases of the respiratory system, each with one-sixth, and by malignant diseases, with one-eleventh.

The variations, since the year 1866, in the *mortality from selected causes* can be followed in Table VI., which is one of the most interesting tables of the series.

The total mortality from the more common *miasmatic diseases*, although not so low as in the preceding year, was considerably under the average. The death-rates from typhoid fever and scarlet fever were very low, and contrast strikingly with the high rates of thirty to forty years ago. Thus, the death-rate from typhoid fever has fallen from 42 to 2 per 100,000 of population, while that from scarlet fever has fallen from 72 to 4. The death-rate from diphtheria was somewhat higher than in the preceding three years, but only about one-half of the rate prevalent thirty years ago. The death-rate from whooping cough was also relatively low, although higher than in the preceding year; but it was only slightly above half of the average rate in each of the two decades 1866-75 and 1876-85. The death-rate for measles was fully twice that for the preceding year, but was slightly under the rate thirty years ago.

The mortality rate from *phthisis* has shown a slight increase in each of the past two years. In 1904, it was 120 per 100,000 of the population; in 1905, 121; and, last year, 124; but in 1903 it had been 143, and had varied from 132 to 188 in the preceding ten years. It is not unlikely that the slight increase in the mortality from phthisis is

TABLE VI.—DEATHS FROM SELECTED CAUSES
(per 100,000 of population).—*Years 1866-1906.*

YEAR.	MIASMATIC DISEASES.								Diarrhoea and Dysentery.	Phthisis.	Cancer and other Malignant Diseases.	Bronchitis.	Pneumonia.	Diseases of Circulatory System.	Diseases of Digestive System. †
	Smallpox.	Scarlet Fever.	Diphtheria.	Measles.	Whooping Cough.	Influenza.	Typhus Fever.	Typhoid Fever.							
1906, - - -	0	4	11	42	39	17	0	2	50	124	82	99	105	181	77
1905, - - -	0	7	6	20	20	20	8	2	65	121	87	120	128	198	84
1904, - - -	0	13	7	58	91	8	5	2	66	120	99	130	130	204	94
1903, - - -	0	8	8	73	27	14	0	2	73	143	83	142	114	217	110
1902, - - -	0	7	13	11	82	29	0	2	53	136	88	144	134	225	100
1901, - - -	0·6	6	10	41	10	27	0	10	18	132	95	162	124	220	178
Average 1901-1905,	0·1	8	9	41	46	20	3	4	55	130	90	140	126	213	113
1900, - - -	0	7	20	37	60	54	0	7	17	166	87	170	123	211	173
1899, - - -	0	11	20	90	34	34	0	15	23	153	98	159	111	180	157
1898, - - -	0	26	25	15	73	23	1	10	23	162	88	173	112	197	194
1897, - - -	0	21	10	17	15	25	0	5	28	157	92	183	106	189	159
1896, - - -	0	44	15	29	86	13	0	4	15	173	91	167	85	172	145
Average 1896-1900,	0	22	18	33	54	30	0·2	8	21	162	91	170	107	190	166
„ 1886-1895,	0·6	18	16	73	60	34	1	12	47	185	76	217	105	169	152
„ 1876-1885,	0·4	24	22	32	67	1	13	21	58	215	65	268	77	125	131
„ 1866-1875,	2·6	72	23	53	67	6	37	42	75	282	59	267	67	133	165

† Classification altered in 1902.

to be associated with the undoubted industrial depression in Aberdeen during the past two years. Such depression necessarily means insufficiency of employment, with lessened income, for the poorest of the working classes, and, accordingly, insufficient feeding. There can scarcely be any doubt that poverty is, by the consequent diminution of the vital powers, a potent cause of the growth of tuberculous disease. As I have remarked in former reports, the great reduction in phthisis witnessed during the last thirty years, and amounting in Aberdeen to more than one-half of the rate prevalent in 1866-75, is probably largely due to the increased vital resistance of the population, arising from increased wages, shorter hours of labour, and the consequent improvement in conditions of living; and I had ventured to predict that, whenever these conditions became less favourable, an increase in the death-rate from tuberculous diseases, especially in the form of phthisis, might be expected. For the moment, the increase in Aberdeen is very slight, and almost negligible, and, should the present industrial depression not continue too long, one may look forward to a return to the gradual diminution which has been experienced until within the last two years.

It is gratifying to observe that the mortality from *cancer* again, as in the preceding year, showed some abatement, but it is still considerably above the rate prevalent thirty to forty years ago. It is somewhat curious that the mortality from this and other malignant diseases should begin to decline at precisely the same time as the rate for phthisis begins to increase; for, previously, the former rate kept increasing whilst the latter kept decreasing. Are meagre conditions of living unfavourable, in some degree, to the development of cancer, while favourable to phthisis?

The death-rate from *bronchitis* last year was by far the lowest recorded, and is now approaching one-third of the average rate about twenty to thirty years ago. It is possible that the very low rate last year from bronchitis may, in some degree, be associated with the apparent increase of phthisis, owing to confusion in diagnosis in a few cases, but such confusion is scarcely likely to occur.

The death-rate from *pneumonia* was also greatly under the average for the past ten years. As with bronchitis, there has been a considerable decline in the rate from pneumonia during the last three years, whereas in preceding years it was distinctly tending to increase.

As the classification of *diarrhoeal diseases* and *diseases of the digestive system* was altered at the beginning of 1902 by the transference, from the latter to the former, of the cases of gastric and intestinal illness believed to be of germ origin, any change in the incidence of the mortality from these diseases can be ascertained only by taking both groups together. Thus combined, the mortality from these diseases shows a marked fall during the past thirty years—a fall which has been especially emphasised during last year, when the rate was the lowest recorded.

MORBIDITY AND MORTALITY FROM ZYMOTICS.

(Table VII.)

Table VII. gives the statistics of the morbidity and mortality from the commoner zymotics during the past year and in each of the preceding ten years. The averages for this decade and for the previous decade are also given. The number of cases or sicknesses is stated for each disease, with the number of deaths, as also the case-mortality, or percentage of deaths to sicknesses.

It is necessary to keep in mind that the compulsory notification of measles and whooping cough was discontinued early in February, 1903. Since that time an effort has been made to obtain information of cases of these diseases through the school attendance officers, and by voluntary intimation. The large number of cases of measles

TABLE VII.—MORBIDITY AND MORTALITY OF ZYMOTICS (MIASMATICS)
DURING EACH YEAR FROM 1896 TO 1906, INCLUSIVE.

DISEASE.		1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	ANNUAL AVERAGE.	
													1896 to 1905.	1886 to 1895.
Smallpox, ...	No. of Sicknesses,	0	0	3	0	0	7	0	1	0	0	0	1.1	5.8
	No. of Deaths, ...	0	0	0	0	0	1	0	0	0	0	0	0.1	0.5
	Percent. of Deaths to Sicknesses, ...	0	0	0	0	0	14.7	0	0	0	0	0	9.1	8.6
<i>Measles, ...</i>	No. of Sicknesses,	2093	370	1913	3246	1999	2796	3061	6527	734	1884	1917	2445	1770.1
	No. of Deaths, ...	72	33	95	118	18	63	56	134	21	23	30	59	83.6
	Percent. of Deaths to Sicknesses, ...	3.4	8.9	5.0	3.6	0.9	2.3	1.8	2.1	2.9	1.2	1.6	2.4	4.7
Scarlet Fever, ...	No. of Sicknesses,	151	215	589	465	321	385	371	342	1078	1053	1676	650	577.3
	No. of Deaths, ...	6	11	21	13	11	9	10	16	38	29	62	22	20.8
	Percent. of Deaths to Sicknesses, ...	4.0	5.1	3.6	2.8	3.4	2.3	2.7	4.7	3.5	2.8	3.7	3.4	3.6
<i>Whooping Cough, ...</i>	No. of Sicknesses,	840	232	1696	507	3645	591	2471	1377	2968	366	1886	1574	984.4
	No. of Deaths, ...	66	34	150	43	129	16	90	50	106	21	128	77	69.4
	Percent. of Deaths to Sicknesses, ...	7.9	14.7	8.8	8.5	3.5	2.7	3.6	3.6	3.6	5.7	6.8	4.9	7.1
Diphtheria,	No. of Sicknesses,	244	166	170	182	180	166	128	153	209	93	108	156	60.4
	No. of Deaths, ...	18	10	12	13	20	14	30	29	37	14	26	21	19.6
	Percent. of Deaths to Sicknesses, ...	7.4	6.0	7.1	7.1	11.1	8.4	23.4	18.9	17.7	51.1	24.0	13.2	32.5
Typhoid Fever, ...	No. of Sicknesses,	16	23	37	26	46	163	109	138	180	58	78	86	96.7
	No. of Deaths, ...	3	4	4	4	3	15	10	22	14	7	5	9	14.6
	Percent. of Deaths to Sicknesses, ...	18.8	17.4	10.8	15.4	6.5	9.2	9.2	51.9	7.8	12.1	6.5	10.3	15.1
Typhus Fever, ...	No. of Sicknesses,	0	98	34	0	0	0	0	5	5	0	0	14	12.2
	No. of Deaths, ...	0	14	9	0	0	0	0	0	2	0	0	3	1.6
	Percent. of Deaths to Sicknesses, ...	0	14.3	26.5	0	0	0	0	0	40.0	0	0	17.6	13.1
Totals, ...	No. of Sicknesses,	3344	1104	4442	4426	6191	4108	6140	8543	5174	3454	5665	4925	3506.7
	No. of Deaths, ...	165	106	291	191	181	118	196	251	218	94	251	190	209.9
	Percent. of Deaths to Sicknesses, ...	4.9	9.6	6.6	4.3	2.9	2.9	3.2	2.1	4.2	2.7	4.4	3.9	6.0

reported during the past year seems to show that this method of obtaining information is working fairly well, and appears to be more complete when the diseases reach epidemic height, as is shown by a comparison of the case-mortality for last year with that for the preceding year. For it is probable that the apparently high case-mortality in 1905, when the disease was not epidemic, was due, in considerable part, to a less complete intimation of cases than in 1906, when the disease was epidemic.

The statistics show that during the past year the total known cases of the seven zymotics embraced in the table were considerably under the average for the preceding ten years. Altogether, 3,344 cases were notified or intimated last year, as against an annual average of 4,925 cases in the previous decennium. By far the most prevalent zymotic was measles (with 2,093 cases). It was followed by whooping cough (with 840 cases), diphtheria (with 244 cases), and scarlet fever (with 151 cases). Typhoid produced only 16 cases.

Smallpox.—There have been no cases of this disease since 1904.

Measles.—For six years ending 1904, this disease was continuously epidemic in the city, but fell off largely in 1905. There has, however, been a renewal of epidemic prevalence in the past year. The case-mortality last year (3·4 per 1,000) was not high, although above the average for the preceding ten years; but it is probable that, owing to the notification of this disease not being now compulsory, the cases were not so fully notified as in the majority of the years with which comparison is made. The Department still continues to visit practically all the cases of measles, and to take steps for securing such home isolation as may be practicable. Only a small percentage of the cases is removed to hospital. The Department seeks especially to impress upon the parents the desirability of saving young children under two or three years from becoming infected, as the mortality at these ages is so much higher than at later ages.

Whooping Cough may also be said to have reached epidemic dimensions during the past year, but not markedly. The number of cases (840) was only about half the average for the preceding ten years. The case-mortality (7·9 per 1,000) was high as compared with the average (4·9), but this, as in each year since 1903, when compulsory notification was stopped, is no doubt due to the incomplete information now obtained in regard to the number of cases. Under a voluntary system of notification, as applied to measles and whooping cough, there seems to be less readiness to intimate cases of whooping cough than cases of measles.

Scarlet Fever was less prevalent last year than it has been for a long series of years, the number of cases notified (151) being less than one-fourth of the average for the preceding decade. The case-mortality (4·0 per 1,000) was somewhat above the average (3·4). Scarlet fever is showing a marked increase during the current year.

Diphtheria exhibited a considerable increase during the past year, 244 cases having been notified, as against an average of 156 for the preceding ten years. This is the largest number in any year for at least ten years. The case-mortality (7·4 per 1,000) is about the same as in the preceding three years, but less than one-third of the mortality in the earlier part of the preceding decennium. As remarked in previous reports, the lower mortality in recent years would appear to be due to antitoxin treatment. In more than one of former annual reports, I have made the suggestion that the Local Authority should supply antitoxin gratuitously to medical practitioners, for use in any case of diphtheria occurring in their practice. I have pleasure in reporting that this suggestion has now been adopted. The conditions under which antitoxin is thus supplied are set forth in the following circular letter issued to medical practitioners in the city:—

“CITY OF ABERDEEN.—PUBLIC HEALTH DEPARTMENT.

“*Treatment of Diphtheria.—Gratuitous Supply of Antitoxin.*

“Dear Sir,—In spite of considerable advances in sanitation, diphtheria cannot be said to have diminished in prevalence in recent times. Nor has the type of the disease under-

gone any marked amelioration, at least in children. The difficulty in controlling the spread of the disease by ordinary preventive measures is probably due largely, as in some other zymotics, to the occurrence of mild ambulant cases that are not recognised by the patient or his friends, and are consequently not submitted to medical treatment. Such cases carry the infection freely about, and it is difficult to see how they can ever be made subject to administrative control. Local authorities are, therefore, coming to be of opinion that, while not relaxing their efforts to check the spread of the disease by the usual methods, they must endeavour to reduce the high mortality from the disease by giving every encouragement to early treatment by antitoxin. There is, perhaps, no remedy for any disease whose action is so well attested; but the remedy must be given early and liberally, upon the first definite suspicion of the disease, and without waiting for the completion of a bacteriological examination. Properly administered, the remedy never produces—in either young or old—bad effects of its own. Hundreds of cases have now been treated with antitoxin at the City Hospital—some with very large doses—and in no case has more than an evanescent rash and feverishness or slight joint pains been observed, and this only in a small proportion of the cases. Treatment with antitoxin is now the routine practice in the diphtheria wards of every fever hospital. In our own hospital it may be said never to be omitted, although the full benefit of its effects is not obtainable except at an early stage of the illness. Few cases reach the hospital in the earlier stages; and we regret to find that scarcely any case, whatever be the stage, has been treated with antitoxin before admission. No doubt, the unusual costliness of the remedy, and, to some extent, also the need—for its convenient application—of a special syringe, have acted as hindrances to its use. In order that these hindrances may no longer interfere with the early and free use of antitoxin, the Town Council have authorised me to place at the disposal of medical practitioners in the city a supply of antitoxin for the treatment of patients suspected to be suffering from diphtheria, as also the loan of a special sterilised syringe. The antitoxin to be supplied will be that prepared by the Lister Institute, and full directions for its administration will accompany each supply. The quantity supplied—unless more, or less, is asked for—will be two bottles, each containing 2,000 units. In a severe case, even if the patient is an infant, the contents of both bottles may be administered at the one time; and, indeed, this may be regarded as the best practice, except in mild cases, where 2,000 units may be sufficient. If the case shows no improvement, a second dose of 2,000 or 4,000 units may be administered after one to two days.

“Such arrangements have been made as will enable you to obtain, at once, by personal call or messenger, either at the Public Health Office (41½ Union Street), or at the City Hospital, a supply of antitoxin and a syringe. The office is open only from 9 a.m. to 6 p.m., but the City Hospital is, of course, always open. The syringe must be returned immediately after use.

“In the event of a supply of antitoxin being obtained but not used, it is requested that it be returned, along with the syringe, as otherwise it may suffer deterioration by being kept for some time before the necessity for its use again arises.

“The Council hopes that the facilities now offered will lead to the antitoxin treatment being employed at the earliest possible moment in every suspected case of diphtheria, and that, in future, it will be the exception, in place of the rule, to find that cases on admission to the City Hospital have not been previously treated with antitoxin. To show the value of early treatment, I append a recent tabular synopsis of 9,765 cases treated at different stages by antitoxin. This table reveals the striking fact that antitoxin, when administered during the first day of the disease, is ten times more effective in saving life than when the administration is delayed till the fifth day or later.

“The whole arrangement is now in working order, and a supply of antitoxin and a

syringe can be obtained at any time after the issue of this letter.—Yours faithfully,—
MATTHEW HAY, *Medical Officer of Health.*”

Effect of Antitoxin Treatment in relation to Day of Disease.
(Biggs & Guerard.)

Day of Disease.	Cases Treated.	Deaths.	Mortality Percentage.
First	1,415	51	3·5
Second	2,640	213	8·0
Third	2,340	300	12·8
Fourth	1,458	346	23·6
Fifth, and after .	1,912	671	35·0

The facilities thus afforded for the use of antitoxin are, I am glad to say, being increasingly taken advantage of. It will be observed that there is no restriction as to the class of patient for whom the remedy may be issued, as it has been felt that no medical practitioner should have any hesitancy in applying for antitoxin because of the possible ability of the patient or his friends to purchase it for themselves. It is a great convenience to a practitioner to obtain, on a few minutes' notice, not only the required quantity of fresh antitoxin, but also a suitable and properly sterilised syringe. We hope, as time goes on, that the provision of these facilities for the use of antitoxin will be reflected in a still greater reduction of the case-mortality in diphtheria.

The cases of diphtheria occurring during the past year were chiefly among school children, and evidently arose from personal contact.

Typhoid Fever.—It is very gratifying to find that typhoid fever continues yearly to decline in Aberdeen, so that last year the very small number of only 16 cases was reported, being only a little above an average of one a month.

In recent years, the belief as to the infectiousness of typhoid fever has been greatly strengthened, especially by the very careful investigations of outbreaks made in some parts of the Continent, and, in some measure also, by similar careful investigations made in this country. It is, therefore, desirable that cases should be isolated as soon as recognised, all the more as the disease is now known to be infectious from the earliest appearance of the clinical symptoms. The early recognition of the disease is now being greatly assisted by newer methods of examining the blood. The well-known Widal test for the blood is not usually obtainable till nearly a week after the commencement of the disease, but some methods directed towards the ascertaining of the actual presence of the typhoid germ in the blood give positive results in the first day or two of the disease, and in as large a proportion as 95 per cent. of all the cases during the first week. With the steady improvement in public water supplies all over the country, and their protection against possible typhoidal infection, and with a system of early recognition and prompt isolation of typhoid cases as they occur, it appears as if we might look forward to typhoid fever becoming as rare in the near future as typhus fever is at present. At the same time, it is my duty to point out as regards Aberdeen, as I have done in almost every annual report, that, in spite of the small amount of typhoid in the city in recent years, the water supply is by no means sufficiently protected against the possibility of dangerous contamination, so long as it is drawn from a river receiving the drainage of a fairly populous valley, and is not submitted to filtration.

Typhus Fever.—It is satisfactory to report that, notwithstanding the considerable outbreak of this disease at the commencement of the preceding year, there was no recurrence of it in the year under review. A few cases of suspected typhus were brought to the notice of the Department, most of which were removed to hospital for observation, but none of them proved to be genuine cases of the disease.

TABLE VIII.—DEATHS AT VARIOUS AGE-PERIODS FROM TUBERCULOUS DISEASES
IN YEAR 1906, WITH AVERAGE FOR PRECEDING FIVE YEARS,

Compared with Deaths from Miasmatic Diseases and from All Causes.

	YEAR.	NUMBER OF DEATHS.					Proportion of Deaths from Tuberculous Diseases to Deaths from All Causes.
		Phthisis.	Other Tuber- culous Diseases.	ALL TUBER- CULOUS DISEASES.	ALL MIAS- MATIC DISEASES	ALL CAUSES.	
ALL AGES - - -	1906 Av. 1901-1905	212 210	116 114	328 324	197 209	2491 2763	1 : 8 1 : 9
Infant Period - - -	1906 Av. 1901-1905	4 9	69 63	73 72	156 158	867 981	1 : 12 1 : 14
0—5 Years - - -							
School Period - - -	1906 Av. 1901-1905	14 15	24 23	38 38	10 11	94 109	1 : 2 1 : 3
5—15 Years - - -							
Adolescent Period - - -	1906 Av. 1901-1905	63 58	6 13	69 71	1 7	122 148	1 : 2 1 : 2
15—25 Years - - -							
Mature Period - - -	1906 Av. 1901-1905	126 118	16 15	142 133	12 15	603 675	1 : 4 1 : 4
25—60 Years - - -							
Post Mature Period - - -	1906 Av. 1901-1905	5 9	1 1	6 10	18 18	805 850	1 : 134 1 : 85
60 + Years - - -							

TUBERCULOUS DISEASES.

(Tables III., IV., V., and VIII.)

The deaths from phthisis amounted last year to 212, or 9 more than in the preceding year, and, if all forms of tuberculous disease are included, the deaths last year were 328, as against 299 in the previous year. These numbers show a less satisfactory state of matters than in either of the preceding two years, but they are considerably under the figures for the years previous to 1904. As has already been remarked in an earlier part of the report, the death-rate from phthisis in Aberdeen is now considerably under half of what it was thirty years ago; and, as I have also remarked, it may be that the slight increase in the past two years is due to the pronounced industrial depression which seems to have been felt fully as much in this city as in any other large Scottish town. The increased deaths from phthisis during the past year have more especially affected the ages of adolescence and maturity. At the earlier age-periods there has been a fall in deaths from phthisis, but an increase in deaths from other tubercular diseases.

The full and systematic inquiry undertaken last year into the circumstances of practically all cases of phthisis among the dispensary and hospital cases in the city is now being completed, and will be the subject of an early report to the Local Authority, with a view to such further steps being taken for the control of the disease as may be found to be practicable.

BACTERIOLOGICAL EXAMINATIONS.

(Table IX.)

In Table IX. is given a summary of the bacteriological examinations made in the Bacteriological Department of the University by Professor Hamilton and his special assistant, Dr. Laing, under the agreement with the Town Council.

During the year, 691 examinations were made of material from cases of disease, exclusive of a few examinations made in connection with meat inspection. The number shows a decrease as compared with that of the preceding year, but the figure (885) for that year included 307 agglutination tests of cases in the typhus outbreak. It is satisfactory to find that the arrangements for these bacteriological examinations continue to be largely utilised by the medical practitioners, although there are still a few who make less use of them than they might, seeing that the examination is made absolutely free of cost, and that the apparatus for taking samples of material is supplied on request.

TABLE IX.—BACTERIOLOGICAL EXAMINATIONS,

Made by Professor Hamilton, University of Aberdeen, under agreement with the Town Council.

YEAR.	SUSPECTED DISEASES.																	OTHER DISEASES.	GRAND TOTAL.
	TYPHUS FEVER.				TYPHOID FEVER.				DIPHTHERIA.				TUBERCULOSIS.						
	Posi- tive.	Nega- tive.	Doubt- ful.	Total.	Posi- tive.	Nega- tive.	Doubt- ful.	Total.	Posi- tive.	Nega- tive.	Doubt- ful.	Total.	Posi- tive.	Nega- tive.	Doubt- ful.	Total.			
1906	...	...	...	...	7	80	0	87	144	195	0	339	84	178	0	262	3	691	
1905	93	214	0	307	8	76	0	84	104	124	0	228	83	182	0	265	1	885	
1904	...	...	...	...	17	95	0	112	160	162	0	322	83	154	0	237	7	688	
1903	...	...	...	...	24	105	1	130	180	150	0	330	60	95	0	155	4	619	
1902	...	...	...	...	31	79	1	111	162	131	3	296	67	128	0	195	3	605	
1901	...	...	...	...	139	58	2	199	104	172	7	283	61	81	0	142	9	633	
1900	...	...	...	...	108	48	6	162	74	95	4	173	37	64	0	101	4	440	
1899	...	...	...	...	152	37	6	195	92	127	13	232	32	52	0	84	3	514	

DISINFECTION AND DISINFECTANTS.

In preceding annual reports I have given the results of a considerable number of experiments that have been made for me by Dr. Laing, of the Bacteriological Department of the University, in order to ascertain the power of various disinfectants. During the past year, Dr. Laing made some experiments of a similar kind with a new disinfectant, Kerol, which has been put forward by its makers as being equal in value to the best of the other disinfectants of a similar type, such as Izal and Cyllin. The sample of Kerol examined was obtained, as

usual, by purchase in open market, and without reference to the makers, who, indeed, have never been informed that tests were being made. The results were as follows:—

KEROL.

(+ = growth; - = no growth.)

Dilution of Disinfectant.	BACILLUS TYPHOSUS.		
	Time of Exposure to Disinfectant in Minutes.		
	5	10	15
1—1,400	-	-	-
1—1,450	+	+	-
1—1,500	+	+	+

Carbolic Coefficient = 12.

Dilution of Disinfectant.	STAPHYLOCOCCUS PYOG. AUR.		
	Time of Exposure to Disinfectant in Minutes.		
	5	10	15
1—300	+	-	-
1—400	+	+	-
1—500	+	+	+

Carbolic Coefficient = 5.

These experiments show that Kerol is a disinfectant of practically equal power with Cyllin and Izal, as also Sapo-Cresol.

COMPARISON WITH OTHER TOWNS.

A comparison is made in Table X. in respect of the birth-, marriage-, and death-rates during the year between Aberdeen and seven other large towns in Scotland. The table summarises the comparisons made in my quarterly reports.

It shows that Aberdeen had, as in the previous year, the fourth highest *birth-rate* (27·6) per 1,000—Greenock, Glasgow, and Leith being higher. The town with the lowest birth-rate was Perth, the rate being only 22·0, but Edinburgh was nearly as low, with 22·4. In respect of the *marriage-rate*, Aberdeen last year occupied the fifth highest place, with a rate of 8·0 per 1,000—Glasgow, Edinburgh, Greenock, and Dundee being higher. The lowest rate was in Leith, with 7·1. In the preceding year, Aberdeen occupied the fourth highest place, and in 1904 the highest place. Its marriage-rate is, therefore, relatively declining.

TABLE X.—BIRTH-, MARRIAGE-, AND DEATH-RATES DURING THE YEAR 1906.

PRINCIPAL TOWNS IN SCOTLAND.

	Glasgow.	Edin- burgh.	Dundee.	Aber- deen.	Paisley.	Leith.	Greenock	Perth.
Estimated population..... (in thousands).	836	341	165	171	87	83	71	35
Birth-Rate..... (per 1000 of population).	29·4	22·4	27·4	27·6	26·3	28·6	32·1	22·0
Marriage-Rate..... (per 1000 of population).	9·1	8·9	8·5	8·0	7·2	7·1	8·7	7·6
Death-Rate*..... (per 1000 of population).								
(a) From all causes, and at every age.....	17·8	16·0	19·7	15·1	15·6	14·8	17·8	16·1
(b) From all causes, and under 5 years of age.....	51·4	39·0	61·7	41·7	37·3	36·8	49·4	33·0
(c) From zymotics (miasmatic) at every age.....	1·6	0·9	1·3	1·1	1·0	0·9	0·8	0·8
(d) From all causes, exclusive of zymotics (miasmatic), at every age.....	16·2	15·1	18·4	14·0	14·6	13·9	17·0	15·3

* The Death-Rate is calculated from the Deaths as registered, without adjustment for "transferred" deaths.

As regards the *death-rate* from all causes and at all ages, Aberdeen had the second lowest rate (15·1 per 1,000). The only one of the large towns with a lower rate was Leith, with 14·8. The highest rate was in Dundee, with 19·7. In the preceding year, Aberdeen occupied the fourth place—Leith, Paisley, and Edinburgh having lower rates. Among children under five years of age, Aberdeen had the fifth lowest rate (41·7)—Perth, Leith, Paisley, and Edinburgh being lower. The highest rate was in Dundee, with 61·7. From miasmatic diseases at all ages, the death-rate in Aberdeen (1·1) was the third highest—Glasgow, and Dundee being higher. The lowest was in Perth and Greenock, each with 0·8. From all causes, excluding miasmatics, the rate in Aberdeen (14·0) was the second lowest, Leith being only slightly lower, with 13·9. The highest was in Dundee, with 18·4.

HOUSING OF THE WORKING CLASSES.

No houses were closed during the year, either under the Housing of the Working Classes Act or under the Aberdeen Corporation Act, 1881. A large amount of slum property has been dealt with in recent years in the city, partly at the direct instance of the Sanitary Department, and partly because of public improvements, so that there is now much less scope than formerly for dealing with houses requiring closure. The last of such schemes of public improvement leading to the demolition of a congested area of old houses, with narrow and ill-lighted courts, was on the east side of the Gallowgate. The clearance, although begun in the preceding year, was not finished until last year. A considerable part of the open space has now been converted into a recreation ground. This will be a great boon in the heart of a very populous part of the city.

Reference has been made in several previous reports to the lack of sink and water-closet accommodation for the houses in the Fishers' Squares, and to the special difficulty experienced in dealing with these houses. No steps were taken during the year under review towards providing such accommodation, but I am glad to be able to state that, more recently, plans have been submitted to the Town Council for supplying certain of the houses with much-needed water closet accommodation. It is to be hoped that similar provision for the remaining houses will be made at an early date.

The Corporation Lodging-House continues, financially, in the satisfactory condition it has attained during the last few years, there being a surplus of income over expenditure and interest on loans.

WORKSHOPS.

(Table XI.)

The number of workshops registered at the end of the year was 1,038, as against 1,178 at the end of the preceding year. The decline is accounted for by a change in the method of reckoning workshops. In previous years, different kinds of businesses carried on by one firm were regarded as so many different workshops. Under instructions from the Home Office, such businesses, where correlated, are now classed as one—for example, fishcuring and coopering. But for this change, the number of workshops on the register would have been increased by 13, as compared with the preceding year.

The following tabular summary of the work done during the year by the Sanitary Staff, in the inspection and regulation of factories and workshops, has been prepared in accordance with the requirements of the Secretary of State.

It ought to be noted that in the list of workshops the numbers relate to workshops solely, as legally defined in the Factory and Workshops Acts, and do not include factories—*e.g.*, the number of bakehouses in the list is stated as 28, but the total number of bakehouses, including those which, on account of employing motive power, are termed factories, was 58.

TABLE XI.—FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOMEWORK

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors.

Premises.	No. of Inspections.	No. of Written Notices.	No. of Prosecutions.
Factories (including Factory Laundries), . . .	217	15	--
Workshops (including Workshop Laundries), . . .	1,841	262	--
Workplaces (other than Outworkers' premises included in Part 3 of this Report), . . .	167	9	—
Total, ...	2,225	286	--

2.—DEFECTS FOUND.

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness, ...	183	194	—	—
Want of ventilation	16	15	—	—
Overcrowding, ...	5	6	—	—
Want of drainage of floors, ...	—	—	—	—
Other nuisances, ...	43	71	—	—
Sanitary accommodation {	insufficient, ...	6	9	—
	unsuitable or defective	3	3	—
	not separate for sexes, ...	—	1	—
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101)	—	—	—	—
Breach of special sanitary requirements for bake- houses (SS. 97 to 100), ...	—	—	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report), ...	—	—	—	—
Total, ...	256	299†	—	—

* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

† Some of these refer to nuisances found in the preceding year.

3.—HOME WORK.

NATURE OF WORK. *	OUTWORKERS' LISTS, SECTION 107.										OUTWORK IN UNWHOLESALE PREMISES, SECTION 108.					OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.			
	Lists received from Employers.				Numbers of Addresses of Outworkers received from other Councils.			Numbers of Addresses of Outworkers forwarded to other Councils.			Prosecutions.		Number of Inspections of Outworkers' Premises.	(11)	(12)	(13)	(14)	(15)	(16)
	Twice in the year.		Once in the year.		(9)	(7)	(8)	(6)											
	Lists. †	Outworkers. †	Lists.	Outworkers.															
(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)	(13)	(14)	(15)	(16)				
Wearing Apparel— (1) making, etc., ... (2) cleaning and washing, ... Lace, lace curtains and nets, ... Furniture and upholstery, ... Fur pulling, ... Umbrellas, ... Paper bags and boxes, ... Brush making, ... Stuffed toys, ... File making, ... Electro-plate, ... Cables and chains, ... Anchors and grapnels Cart gear, ... Locks, latches, and keys, ... TOTAL, ...	6	134	6	33	—	6	—	—	85	—	—	—	—	—	—				

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 4 as the case may be) against the principal class *only*, but the outworkers should be assigned in column 3 (or 5) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2 and 3 are the *total* number of lists received from employers who sent them both in February and August as required by the Act and of the entries of names of outworkers in those lists. They will, therefore, usually be double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of 1906:—

	Number.		Number.
Bakehouses, ...	28	Painters, ...	50
Blacksmiths, ...	34	Plumbers, ...	31
Coopers, ...	10	Stonecutters, ...	33
Fish Curers, }	122	Wearing Apparel, Makers of, ...	305
Fish Packers, }		Other workshops, ...	374
Joiners, ...	40		—
Furniture, Makers of	61	Total No. of workshops on Register, 1,088	

5.—OTHER MATTERS.

Matters notified to H.M. Inspector of Factories:—

Class.		Number.
Failure to affix Abstract of the Factory and Workshop Act (S. 133), ...		0
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5). }	Notified by H.M. Inspector, ...	33
	Reports (of action taken) sent to H.M. Inspector	33
Other		27

Underground Bakehouses (S. 101):—

Certificates granted during the year	0
In use at the end of the year.	10

Much valuable work continues to be done by the Sanitary Inspector and his staff in the sanitary control of the workshops in the city. They are, on the whole, in good condition. It is difficult to bring the older workshops into strict keeping with the most modern requirements without serious structural alterations, but these requirements have been pushed as far as is practicable and reasonable.

Fishcuring Workshops.—A report was prepared, during the year, by the Sanitary Inspector and myself, at the request of the Local Government Board, in regard to the housing accommodation for workers engaged in the herring-curing industry in the city, and in regard also to the construction and sanitary condition of fishcuring workshops generally. It was satisfactory, subsequently, to learn that the report showed, in comparison with similar reports for other places, that the provision in Aberdeen for these purposes, although, perhaps, not altogether ideal, especially as concerns the accommodation for herring workers, is considerably in advance of that met with in nearly all other fishing centres in Scotland. A great deal of attention has been given by the Sanitary Inspector and myself for a number of years to the proper construction and condition of the fishcuring workshops, and also to the accommodation for herring workers. Owing to the shortness of the season during which the latter are resident in the dormitories provided for them, there is more difficulty in insisting upon the erection of substantial buildings, replete with all modern conveniences. At the same time, it has been our endeavour to see that they should all reach a reasonable minimum sanitary standard.

Bakehouses.—The bakehouses were, as usual, inspected every quarter during the year, and were found, as a rule, to be in a satisfactory condition, although there is still need, as I have stated in previous reports, for the maintenance of a higher standard of cleanliness in several of the bakehouses, especially in regard to floors and walls. Several notices for the limewashing of bakehouses were issued during the year by the Sanitary Inspector, as also

some notices for the cleaning of floors and the repair of walls and ceilings. Three bakehouses, which had ceased to be occupied for a time, were reopened during the year, and freshly registered. All of them were small. Six bakehouses ceased to be occupied in the course of the year. One of the larger bakehouses was extended during the year, and plans of it were revised by the Sanitary Inspector and myself.

Dairies.—The dairies have been regularly inspected, both by the Dairy Inspector and the Veterinary Inspector. The condition of the dairies within the city has shown a marked improvement within recent years, due to the steady enforcement of the regulations by the Sanitary Department. There is, however, still room for further advance in connection with the scrupulous care to be exercised in the milking of the cows and in the subsequent handling of the milk, so as to reduce the germ contamination to the lowest possible limit. This is a subject that is deservedly receiving much attention in some other parts of the world. There are few spheres of sanitary work in which more progress may be made than in securing greater purity of the milk supply.

Inspection of Plans.—As usual, a considerable number of plans of factories and workshops, especially those in which foodstuffs are prepared, or in which there is any apprehension of nuisance, were examined and reported on by the Sanitary Inspector and myself. Thus, 12 plans for the erection or extension or alteration of workshops and factories were reported on, exclusive of 1 plan of premises in which an offensive trade, as defined by the Public Health Act, was being conducted. In the previous year the number of plans examined was 11, and in 1904 there were 17. The bulk of the plans, as in previous years, related to fishcuring and provision-curing works, and all the recommendations made by us were given effect to. They chiefly related to improvements in lighting and ventilation, to the paving of floors, and to the provision of sufficient water-closet accommodation.

OFFENSIVE TRADES.

The offensive trades in Aberdeen, within the meaning of the Public Health Act, are concerned chiefly with tallow-melting or oil-extracting (from ox bones or fish livers), soap-boiling, slaughtering, hide-factoring, and the manufacture of manures. No serious complaints were received regarding any of these trades during the year, and any received were at once attended to when brought under the notice of the owners of the works. No applications were made to the Town Council during the year for sanction to establish new businesses coming under the list of offensive trades in the Public Health Act. Several applications were, however, received for the extension or alteration of certain premises in which such business was already being carried on, but, with one exception, in which the business was that of a chemical manure manufacturer, the applications related to slaughter-houses.

Slaughter-Houses.—There was no alteration in the number of slaughter-houses during the year, which remains at 8. Only three of the slaughter-houses have as yet been licensed, as the others are not in conformity with the bye-laws. The unlicensed slaughter-houses include the two largest slaughter-houses in the city, one of which—the West Hutcheon Street slaughter-house—until recently was owned privately, and the other—the Wales Street slaughter-house—is the property of the Fleshers' Incorporation. The Incorporation has now purchased the former slaughter-house, and proposes to abandon its premises in Wales Street, and to concentrate the whole of its slaughtering within a rebuilt and largely extended slaughter-house at West Hutcheon Street, for which it has now acquired a sufficient extent of ground. The plans for this new slaughter-house have been passed during the current year, and are about to be carried into effect. This will remove from Wales Street, which is in a populous part of the city, and at a considerable distance from the auction marts and the railway stations, a slaughter-house which for many years has been felt to be badly situated. It is intended by the Incorporation that, in the new slaughter-house at West Hutcheon

Street, which will almost be of the dimensions and character of a public slaughter-house, every facility will be given for its inspection and control in sanitary respects by the Public Health Department. One of the three slaughter-houses which remained unlicensed at the end of the year has now undergone considerable reconstruction and enlargement, and has been licensed during the current year. The remaining two unlicensed slaughter-houses are small slaughter-houses in Woodside, one of which will probably have to be closed, while the other has been awaiting a proposed street deviation before undertaking all the structural alterations required to bring the premises into full accordance with the bye-laws.

Owing to the proposal for a public slaughter-house having been more or less continuously before the Town Council for some years, the structural requirements of the bye-laws have not been so strictly enforced as they might, but, with the establishment of the new slaughter-house at West Hutcheon Street, and the formal abandonment by the Town Council of its scheme for a public slaughter-house, there is no longer any occasion for laxity in enforcing the regulations, and I accordingly hope to be able to report, so soon as the new slaughter-house is completed and occupied, that all the slaughter-houses in the city are in complete compliance with the regulations.

WATER SUPPLY.

I can only repeat what I have stated regularly in these reports, that the water supply of the city will continue to be unsatisfactory, and even dangerous, so long as it is taken in an unfiltered condition from a river draining a valley with a considerable population along its banks.

In September of last year, Professor Hamilton and myself, at the request of the Water Committee, inspected certain alleged sources of pollution of the waters of the Dee above the intake of the city water supply at Invercannie, and a detailed report on the subject was submitted to the Council in October, and appears in their Minutes. The report shows that at various points in the course of the Dee above Invercannie considerable pollution with domestic sewage was taking place, and that some of it was as low down the river as South Aboyne, which is only a few miles above the intake. Since the report was presented, certain of the sources of pollution have been dealt with, but some of them remain as when inspected. The closing words of the report were as follows:—"We are distinctly of opinion from these inspections—which were, in a sense, only sample inspections, as we did not attempt a systematic examination of all possible sources of pollution—that the River Dee above Invercannie is open to dangerous pollution, and that considerable pollution is actually taking place." At the next meeting of the Council, Professor Hamilton and I were authorised to make a weekly chemical and bacteriological examination of the water as supplied in the city. These examinations have now extended over a period of twelve months, and the results will be laid before the Town Council at an early date. It may meanwhile be stated that they show, as was to be expected, that the water is liable to a large amount of surface pollution, especially as indicated by the high proportion of bacilli coli. These bacilli were repeatedly found in as small a quantity of the water as 1 c.c.

The Water Committee of the Town Council is quite alive to the unsatisfactory state of the water supply, and has taken every practicable step to secure the river against serious pollution; but the task is an impossible one, on account of the length of the river, the number of possible points of pollution, and the difficulty of ensuring that safeguards erected in one month will be in proper working condition the next month.

The Committee have accordingly still under active consideration the question of a new water supply, and have been in further consultation with eminent water engineers.

It is certainly desirable that steps should be taken, at an early date, either for the proper filtration of the present supply, or for the introduction of a new supply from a purer source.

SEWERAGE.

Reference was made in the report for the previous year to the extensive scheme for carrying the sewage of the city, by the Bay of Nigg, to Girdleness. The main part of this scheme is now completed, and recently put into operation. Some delay, however, has been experienced, owing to unexpected engineering difficulties, in bringing the sewage of Woodside within the same scheme, but these difficulties are now being overcome. The River Don still continues to present a large amount of pollution in the last three or four miles of its flow. The new scheme for dealing with the Woodside sewage will, when completed, remove part of this pollution, but the bulk of it is due to paper works, chiefly beyond the boundaries of the city. These works are understood to make some attempt at purifying their waste liquids, but it is obvious that the purification is far from complete. It is desirable that further pressure be used to oblige the proprietors of the works to employ all practicable means of purification.

CITY HOSPITAL.

(Table XII.)

No additions were made to the buildings of the hospital during the year. The amount of accommodation in proportion to population is smaller than in most towns, and is considerably under the usual proportion of one bed per thousand of population, especially as one of the pavilions has constantly to be kept in reserve for contact cases, in the event of the outbreak of any dangerous zymotic. Had it not been for this scantiness in accommodation, I would have felt disposed to recommend to the Town Council that they should follow the example of some other places in setting aside a pavilion for the admission of cases of phthisis. There can be no doubt that such provision would be of great service, and it is worth considering whether the Town Council should not erect a pavilion specially for this purpose. It is satisfactory to note that the Parish Council have in their new poorhouse made special provision for consumptive cases.

The number of admissions (445) to the hospital was considerably under the average for the preceding ten years, and was, indeed, lower than in any one of these years. This was due to the absence of any large epidemic of such diseases as are admitted in numbers to the hospital. Measles was epidemic during the year, but only 50 cases were removed to hospital.

The accompanying table gives a summary of all the cases admitted during the year, together with a corresponding summary for each of the preceding ten years. Scarlet fever usually supplies the bulk of the cases requiring admission, but during last year diphtheria provided a still larger number of cases.

In all, 192 cases of diphtheria were admitted—a number that is fully twice the average for the preceding ten years. The cases admitted amounted to 79 per cent. of the cases notified. The case-mortality was 8·9 per cent., which is somewhat above the average for the preceding ten years, but the deaths were almost entirely confined to young children who were sent too late to hospital to allow of the effective use of antitoxin. Antitoxin is a remedy which, on account of its harmlessness, should be administered even in suspicious cases of diphtheria, without waiting for the full development of the disease or for the bacteriological confirmation of the diagnosis. Especially is this true of young children, in whom the disease is so frequently serious.

Scarlet fever accounted for 140 of the admissions, being 93 per cent. of the total cases notified. The case-mortality was slightly above the average for the preceding ten years.

Measles, as already stated, contributed 50 cases to the hospital during the year, being about 2·5 per cent. of the cases known to have occurred in the city. The case-mortality was somewhat high, being 6 per cent., but this was due to some of the children suffering from other diseases at the time of infection with measles.

TABLE XII.

CITY HOSPITAL—ANNUAL SUMMARY, 1906.

ZYMOTIC ADMISSIONS AND DEATHS DURING EACH YEAR FROM 1896 TO 1906 INCLUSIVE.

DISEASE.		1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1896-1905.	
													Total.	Annual Average
Smallpox,....	Admitted, ...	0	0	3	0	0	7	0	2	0	0	0	12	1·2
	Died, ...	0	0	0	0	0	1	0	0	0	0	0	1	0·1
	Percent. of Deaths to Admissions,...	0	0	0	0	0	14·7	0	0	0	0	0	...	8·3
Measles, ...	Admitted, ...	50	6	72	78	156	133	342	191	194	129	266	1567	156·7
	Died, ...	3	0	1	9	3	4	9	4	7	0	4	41	4·1
	Percent. of Deaths to Admissions,...	6·0	0	1·4	11·5	1·9	3·0	2·6	2·1	3·6	0	1·5	...	2·6
Scarlet Fever,.....	Admitted, ...	140	185	534	408	278	340	280	343	920	842	1181	5311	531·1
	Died, ...	5	7	16	9	8	5	7	16	28	16	29	141	14·1
	Percent. of Deaths to Admissions,...	3·6	3·8	3·0	2·2	2·9	1·5	2·5	4·7	3·0	1·9	2·5	...	2·7
Diphtheria,...	Admitted, ...	192	127	131	120	107	101	82	78	79	26	35	886	88·6
	Died, ...	17	7	9	8	8	5	6	8	4	2	2	59	5·9
	Percent. of Deaths to Admissions,...	8·9	5·5	6·9	6·7	7·5	4·9	7·3	10·3	5·0	7·7	5·7	...	6·7
†Typhoid Fever,.....	Admitted, ...	9	13	24	22	28	70	26	35	18	0	0	236	23·6
	Died, ...	0	3	2	0	1	1	2	6	2	0	0	17	1·7
	Percent. of Deaths to Admissions,...	0	23·1	8·3	0	3·6	1·4	7·7	17·1	11·0	0	0	...	7·2
Typhus Fever,.....	Admitted, ...	0	97	22	0	0	0	0	5	5	0	0	129	12·9
	Died, ...	0	12	1	0	0	0	0	0	2	0	0	15	1·5
	Percent. of Deaths to Admissions,...	0	12·4	4·5	0	0	0	0	0	40·0	0	0	...	11·6
Other Zymotics,	Admitted, ...	17	12	29	17	32	18	14	10	12	4	1	149	14·9
	Died, ...	0	2	4	2	3	1	2	1	1	0	0	16	1·6
	Percent. of Deaths to Admissions,...	0	16·7	13·8	11·8	9·4	5·6	14·3	10·0	8·3	0	0	...	10·7
Total Zymotics,	Admitted, ...	408	440	815	645	601	669	744	664	1228	1001	1483	8250	829·0
	Died, ...	25	31	33	28	23	17	26	35	44	18	35	290	29·0
	Percent. of Deaths to Admissions,...	6·1	7·1	4·0	4·3	3·8	2·5	3·5	5·3	3·6	1·8	2·4	...	3·5
Quarantine, ..	Admitted, ...	37	181	25	14	6	43	18	22	34	16	23	382	38·2
	Died, ...	6	6	3	3	0	0	0	0	0	1	1	14	1·4
	Percent. of Deaths to Admissions,...	16·2	3·3	12·0	21·4	0	0	0	0	0	6·2	4·3	...	3·7

† Prior to 1899, the cases of Typhoid Fever were mostly removed to the Royal Infirmary or Sick Children's Hospital for treatment.

Only 9 cases of typhoid fever required admission to the hospital, and none of these proved fatal. In addition, 5 mild cases of para-typhoid fever were removed from one household in Torry. The bacillus found in these cases was that known as type B.

No cases of smallpox or typhus fever were treated.

A few cases of other zymotics were admitted, such as erysipelas, puerperal fever, and whooping cough; and several cases were admitted as contacts, or as suffering from diseases simulating certain zymotics.

ABERDEEN, 14th December, 1907.

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